

**COMMONWEALTH OF KENTUCKY
FINANCE AND ADMINISTRATION CABINET
DIVISION OF REAL PROPERTIES**

INVITATION FOR BIDS

FOR LICENSE

State-Owned Real Property

**Mixed Timber Harvest and Sale
Fleming WMA
Fleming County, Kentucky**

**Invitation to Bid: 10252019
Bid Opens: Friday, October 25, 2019 at 3 p.m. ET.**

INSTRUCTIONS TO BIDDERS

1. Bid must be submitted on the "Form of Proposal" included within and made part of this invitation, appropriately signed and received at the Division of Real Properties, State Properties Branch, Bush Building, 3rd Floor, 403 Wapping Street, Frankfort, KY 40601-2607, no later than the specified "bid opening date and time."
2. The Commonwealth of Kentucky reserves the unqualified right to reject any or all bids.
3. Bidders are invited to attend bid openings.
4. For further information or to obtain a bid package, contact Wendell Harris @ (502) 564-9831 or email Wendell.harris@ky.gov, State Properties Branch, Division of Real Properties, Bush Building, 3rd Floor, 403 Wapping Street, Frankfort, KY 40601-2607 or Jacob Stewart @ (859)-289-8564 or Jacob.stewart@ky.gov, Public Lands Biologist.
5. **NOTICE TO BIDDER:** If you plan to attend the bid opening and have a disability that requires accommodation, please contact our office by Thursday, Oct. 24 so that reasonable arrangements can be made.

**GENERAL TERMS AND CONDITIONS
INVITATION TO BID
SALE OF TIMBER**

**FLEMING WILDLIFE MANAGEMENT AREA
FLEMING COUNTY, KENTUCKY**

GENERAL TERMS AND CONDITIONS

Scope of Project

At the request of the Kentucky Department of Fish and Wildlife Resource, hereinafter referred to as the "KDFWR", the Division of Real Properties issues this Invitation for Bids to harvest a tract of timber adding up to approximately 64 acres of the Fleming Wildlife Management Area, hereinafter referred to as "Fleming WMA". The areas of interest and inventory data will be shown on Exhibit "A". The successful bidder shall have until June 30, 2020 from the date of execution of the resulting license agreement to remove the subject timber from the premises. Persons interested in responding to this Invitation to Bid must submit the enclosed sealed bid form of proposal. **All bids should be submitted on or before Friday, October 25, 2019 at 3 p.m. ET.** This Invitation to Bid and the bidder's response, when accepted by KDFWR, will govern any license agreement issued as a result of this Invitation to Bid. The license agreement shall commence on the date executed by the Secretary of the Finance and Administration Cabinet.

TERMS AND CONDITIONS

The harvesting of timber, as specified in this bid package, shall be in accordance with all terms and provisions specified herein. The timber sale areas are within the Fleming WMA property located in Fleming County, Kentucky. The timber sale boundary areas contain approximately 64 acres. Due to United States Fish and Wildlife Service (USFWS) regulations, the cutting of timber/trees is only permitted from August 1- April 30. The winning bidder will also not be allowed to work on the following weekends: October 12-13 and 19-20, no weekends in November, December 14-15 and December 21-22. The winning bidder can remove cut timber or dress and seed areas within the cutting boundary after April 30 but NO trees are to be cut or damaged under penalty of Federal Law. Boundaries and some leave trees will be marked by KDFWR prior to any operations by the bidder. The timber sale area boundaries will be definitively designated by orange paint on trees, leave trees will be ringed with blue tree paint. Orange boundary paint will be visible from within the sale boundary and marked boundary trees are to be left standing and unharmed. Blue tree paint will designate leave trees which are defined as tree to be left standing and unharmed. The size of the unit will determine how the stand is to be harvested. If the unit is less than two acres all trees will be cut. If the stand is greater than two acres you must follow the following restrictions, oak trees of any species are not to be cut, damaged or taken within any parcel marked for harvesting unless marked with a white X, KDFWR staff have marked leave trees with orange paint but makes no guarantees that all oak trees are marked. Therefore, it will be at the logger's discretion not to harvest or sell any species of oak within the said areas. All pulpwood not marked as a leave tree with a stump diameter of 5 inches or greater within the timber sale areas are to be cut. Cutting of timber by mechanical means is preferred, examples would include but are not limited to harvester-forwarder method or feller buncher and skidding. It is expected that equipment will be cleaned to prevent the spread of exotic/invasive species on property owned by

KDFWR. Although this is the preferred method KDFWR understands that all tracts of timber may not be suitable for mechanized harvest, therefore some areas may require non-mechanized harvest. KDFWR requires copies of all tally sheets for all loads the previous week first thing Monday morning.

It will be the bidder's responsibility to build a proximately 1.3 miles by 14ft wide road which will be used during the duration of the logging job (see Appendix B). The location of the new road will be determined by KDFWR and will meet the following specifications: All vegetation, wet, organic, uncompact soil or other undesirable materials shall be removed from the entire length and width. The subgrade shall be of firm undisturbed soil material or shall be of suitable compacted materials approved by KDFWR. The road shall be crowned to direct precipitation off the road. It will be the bidder's responsibility to spot rock as needed to facilitate log removal from Fleming WMA.

Ditches and up to 10, 18-24 inch culverts will be provided and installed by bidder. Design ditch channels to have stable grades and side slopes no steeper than 2 to 1 to move water away from the road to prevent flows from causing roadside erosion and provide a stable outlet for the ditch. The capacity of a roadside ditch must be adequate to carry the drainage from the road surface to outlet. Culverts will be installed based specifications in Appendix C in locations directed by KDFWR.

Bid and payment(s) will be identified on a total payment lump sum for all timber in identified tracts for harvest, sawtimber and pulpwood. *Bids should indicate a lump sum payment for all timber products identified in this bid package that will be paid to KDFWR.* The Commonwealth of Kentucky will receive a lump sum price for all timber products from the awarded bidder. The lump sum payment for timber is to be paid before any logging activity begins. The purchaser shall make bond or deposit with the State by check or cash within 5 days of the signing of this contract for the sum of \$5,000 to be held in escrow against the full compliance by the purchaser of the conditions and requirements of this contract. The bond or deposit must total \$10,000 before any logging operations is to begin. A total bond payment of \$10,000 and the lump sum price for all timber products is to be paid in full to the Commonwealth of Kentucky before any activity begins. This bond or deposit will be forfeited to the state if the purchaser fails to fulfill all the conditions and requirements of the contract. If the logger is found to be falsifying tally sheets, cutting timber outside the harvest units or selling tree species (e.g. oak) described above which are not to be harvested then the logger forfeits their performance bond and any timber remaining to be harvested. If the fore mentioned conditions occur the logger will vacate the premises and all remaining timber immediately. Upon satisfactory completion to the state of this contract, the bond will be released or the deposit returned to the purchaser.

All improvements to the Fleming WMA shall be removed prior to the expiration of the license or extensions thereof. Any improvements remaining on the premises shall become the property of KDFWR without recourse by the bidder, unless written authorization is issued by KDFWR.

It will be the responsibility of each bidder to examine and survey the areas on which logging operations will take place to make their own determination as to the logistics of removing timber from the above described tract(s). KDFWR must approve all ingress and egress routes to the tracts

prior to the commencement of logging activities, and it will be the responsibility of the bidder to build and maintain suitable roads to carry out the logging operation. KDFWR has inventoried the tracts and estimates of pulpwood and sawtimber volumes will be provided for review.

No marked leave trees may be harvested or purposely damaged during the timber operation. Accidental damage to mature hardwood trees must be minimized. Some damage to residual non-pulpwood or leave trees will occur, however damage must be minimized and damage will be assessed for each tract. Provisions for excessive damage will be as follows: for non-harvested trees greater than 6 inches in diameter at breast height, if damage exceeds 10%, a compensation of \$250 (one hundred dollars) per damaged tree above the 10% threshold will be assessed. Damage is defined as knockdown; topping or main stem breakage; over one-third of the main crown removed; stripping or removing bark on the butt log due to skidding; felling or other harvesting operations that exposes over 100 square inches of wood; or trees that are bent over 20 degrees from normal. Minor damage (damage under the specifications listed above) will not be assessed. Special consideration will be provided to account for weather or storm conditions that may occur during or directly before the harvest that might render a higher degree of harvest damage to the residual stand than would normally occur.

All telephone lines, ditches, bridges, roads, pipelines and fences located within or immediately outside the boundaries of the sale areas shall be protected by the bidder during cutting and logging operations. The bidder is required to notify the KDFWR if damage occurs and the bidder is responsible for repairs as soon as possible under the supervision of KDFWR. The bidder will be permitted to erect improvements to carry out the logging operation of this agreement, with all improvements being approved by KDFWR.

All roads and trails shall, at all times, be kept free of logs, brush, and debris resulting from the cutting and logging operations under this license. The bidder is responsible for maintaining public roads and rights-of-way free of soil and logging debris. Practices must be undertaken to restrict the deposition of soil onto public roads. The bidder is also responsible for timely clearing of soil deposited onto public roads. If the bidder fails to keep them clear, then KDFWR will clear them and the bidder shall reimburse KDFWR for the cost.

Logging slash and other woody debris will be piled or spread within the harvest tracts or directly adjacent to them in accordance with directions issued by a KDFWR Biologist. All tops will be cut so that they are no taller than three foot.

The bidder assumes his/her full share of the maintenance of any established public and non-public roads and bridges that he/she may use in conducting the operations of cutting and logging the timber under this license. The bidder agrees to maintain during operations said roads and bridges in as good a condition as prior to the beginning of operations. After the completion of the logging operation the bidder will be required to grade and re-gravel with three inches of #467 the WMA gravel roads that were utilized during the logging operation. WMA roads that are open to public vehicular traffic must remain open to the public and in acceptable quality for passenger vehicles. Any paved roads used by the contractor must be returned to a condition as good as their condition prior to the beginning of the logging operations at the sole expense of the bidder.

Issues that may arise regarding damage to county-owned and -maintained roads by the contractors' equipment and hauling trucks will be the responsibility of the contractor and will not be the responsibility of KDFWR.

The bidder must use all appropriate Best Management Practices for water quality protection as specified by the Kentucky Forest Conservation Act. The KDFWR must approve all stream and channel crossing locations. Improved stream and channel crossings must be used where appropriate and approved by KDFWR prior to installation. Retirement of landings, haul roads, and skid trails shall be completed in accordance with the appropriate Best Management Practices (BMPs) referenced above including: the elimination of berms, removal of ruts, and other practices needed to resurface roads, trails, and landings; installation of permanent water control structures; preparation of seedbed; application of seed (seed mixes must be approved by KDFWR); and application of lime and fertilizer as indicated by soil testing and/or direction from KDFWR. Once landings, haul roads and skid trails have been retired they are to be seeded with the seed mixtures mentioned below. Purchase and application of seed is the responsibility of the winning bidder, any deviation to the seed mixture must be approved by KDFWR. Seed mixes are as follows, for anything below 10% slope- 4# ladino white clover, 4# white clover and 50# wheat. These rates are per acre and should be mixed together and sown. For anything 10% slope and over 8# white clover and 100#wheat per acre.

The bidder agrees not to pollute any streams of the sale area, and to keep the streams and water resources free from soil and logging debris and trash generated from logging operations on said area, and will forever protect, indemnify and hold harmless KDFWR from any and all claims, costs, prosecutions, or actions resulting from any violations by him.

During the term of this license, the bidder agrees to exercise all means in his power to prevent the start of and to suppress all forest fires on the licensed area and in its vicinity. The bidder is responsible for contacting KDFWR and appropriate local authorities in the event of a fire. No fire for any purposes is allowed on the logging operation without approval of KDFWR.

During high and extreme fire hazard weather, KDFWR may prohibit logging. KDFWR reserves the right to suspend logging (harvesting and hauling) operations when weather conditions will lead to rutting that cannot be fixed with equipment that is available and on-site or conditions are deemed as such to produce long-term impairment of the water bodies.

All operations being carried out by the bidder for the cutting and removal of the timber under this sale may be suspended by KDFWR if the conditions and requirements contained in this license are disregarded. Continued failure to comply with any one of the stated conditions and/or requirements shall be sufficient cause for the termination of this license.

Complaints or disagreements by the bidder as to any actions taken by KDFWR respecting this license shall not be considered unless made in writing within thirty (30) days of such action causing a complaint or disagreement by the bidder to the Director of KDFWR. The decision of the Director shall be final in the settling of complaints and disagreements on the part of the bidder as they pertain to the interpretation of the regulations and provisions of this bid package.

When timbering operations are in progress, the bidder shall have, at all times, at the site of activities, a representative who shall be authorized to receive, on behalf of the bidder, any and all notices and instructions in regard to the conditions and requirements set forth in this license and to take such action as may be required under the terms of this license. *A Kentucky Master Logger must be present on the harvest site at all times while harvesting activities are underway.* KDFWR will provide contact personnel that will be available on-site in a reasonable period of time.

All records of the bidder as they pertain to the operations being carried out under the terms of this sale shall be open to inspection at any time by KDFWR.

The bidder shall have no right or license to use any part of the area outside the boundary of the area herein described, unless the bidder shall have obtained special written permission from KDFWR describing the limitations of such use.

The mineral and right-of-way rights over, on, in, and under the sale area herein described are in no way affected by this license. KDFWR, nor any licensee, nor successor, nor assignee of it shall be liable to the bidder for any damages because of the exercise of their rights, however, or by whomever conducted, and that the bidder agrees to hold KDFWR harmless from any claims for such damages on the part of the bidder. The successful bidder should coordinate the logging operation at all times with the KDFWR Forest Management Biologist or KDFWR Wildlife Biologist. KDFWR does not undertake to furnish to the bidder right-of-way over lands belonging to others.

It is agreed by the parties hereto that all questions as to the execution, validity, interpretation, construction and performance of the resulting License Agreement shall be governed by the laws of the Commonwealth of Kentucky. Furthermore, the parties hereto further agree that any legal action, which is brought on the basis of said Agreement, shall be filed in the circuit court of Franklin County, Kentucky.

NOTE:

The license will be awarded for the harvest and sale of timber from approximately 64 acres on a highest lump sum payment to that responsible, responsive bidder whose offer conforming to this Invitation to Bid will be most advantageous to KDFWR. KDFWR expressly reserves the right to reject any or all bids and to waive technicalities and minor irregularities in form of bids submitted. Any bidder's past performance under license shall be a consideration and may be a factor in the award or denial of the license.

Additional terms and conditions may be added to the agreement, as mutually agreed and as necessary between the parties. Nothing in this license shall be construed to convey or grant any right, title, interest, estate, claim, or demand in or to the licensed premises other than the right to use licensed premises for the purposes and under the terms and conditions stated in this license.

The bidder agrees to indemnify, defend, and hold harmless KDFWR, its officers, agencies, and employees from:

- (a) Any claims or losses for services rendered by the bidder, person, or firm performing or supplying, services, materials, or supplies in connection with the performance of the license.
- (b) Any claims or losses to any person or firm injured or damaged by the erroneous or negligent acts of the bidder, its officers, or employees in the performance of the license.
- (c) Any failure of the bidder, its officers, or employees to observe Kentucky laws, including, but not limited to labor laws and minimum wage laws.
- (d) The bidder agrees that all goods and chattels placed in or about the property shall be at the sole risk of the bidder, and KDFWR shall not be liable for injury or damage to property from any cause.

Information Required in Each Offer

1. **Contact:** Include the name and phone number of the individual who is to be the principal contact with KDFWR.
2. **Signature:** The principal contact must include his/her signature on the bid proposal.
3. **References:** Contact information for up to three (3) landowner references should be provided in the proposal. These landowners will have had timber harvested on their properties within the past five (5) years by the bidder. If no previous timber harvesting has been conducted by the bidder, then character or other work references should be provided.
4. **Harvest equipment:** Preference for use of mechanical for harvesting.
5. **Bid:** Include a bid amount (lump sum payment for all timber, pulpwood and sawtimber) which will be paid to KDFWR upon the sale of timber harvested under this contract.

Qualifications

After determining that a bid proposal satisfies the requirements of this project, the Commissioner of KDFWR, or a designee, will evaluate the bid proposal based on the following factors.

1. Bid Amount.....100%

KDFWR reserves the right to conduct discussions/meetings with any offeror to determine their qualifications for further consideration. Discussions shall not disclose any information derived from bid proposal submitted by other offerors.

After determining the best bid proposal received, KDFWR may negotiate a fair and reasonable compensation rate based on the pricing submitted in the offeror's bid proposal.

FORM OF PROPOSAL (SEALED BID)

TO: Finance and Administration Cabinet
Department for Facilities and Support Services
Division of Real Properties
Third Floor, Bush Building
403 Wapping Street
Frankfort, Kentucky 40601-2607

INVITATION NO: 10252019

BID OPENING: Fri. Oct. 25, 2019

AT: 3 p.m. ET

Subject to the General Terms and Conditions and Authentication of Bid and Affidavit of Non-Collusion and Non-Conflict of Interest, *I propose to pay the Commonwealth of Kentucky the following lump sum amount for all timber in this sale:*

\$ _____ of total lump sum price of timber forest products harvested from the subject 64 acres in four separate tracts within Fleming WMA

**AUTHENTICATION OF BID AND AFFIDAVIT OF
NON-COLLUSION AND NON-CONFLICT OF INTEREST**

I hereby swear (or affirm) under the penalty for false swearing as provided by KRS 523.040:

1. That I am the Bidder (if the Bidder is an individual), a partner (if the Bidder is a partnership) or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);
2. That the attached bid or bids covering Kentucky Division of Real Properties Invitation No. **10252019** have been arrived at by the bidder independently and have been submitted without collusion with, and without any agreement, understanding or planned common course of action with any other lessee of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition;
3. That the contents of the bid or bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished with the bid or bids and will not be communicated to any such person prior to the official opening of the bid or bids;
4. That the Bidder is legally entitled to enter into contracts with KDFWR of Kentucky and is not in violation of any conflict of interest, statute, including the provisions of KRS 45A.330 to 45A.340, 45A.990, 45A.164.390 or KRS 11A.040 of the Executive Branch Code of Ethics; and,
5. That I have fully informed myself regarding the accuracy of the statements made above.

NOTICE

1. Any agreement or collusion among Bidders or prospective Bidders which restrains, tends to restrain or is reasonably calculated to restrain competition by agreement to bid at a fixed price, or to refrain from bidding, or otherwise, is prohibited.
2. Any person who violates any provisions of KRS 45A.325 shall be guilty of a felony and shall be punished by a fine not less than five thousand dollars (\$5,000), nor more than ten thousand dollars (\$10,000), imprisonment for not less than one (1) year, nor more than five (5) years, or both such fine and imprisonment. Any firm, corporation or association which violates any of the provisions of KRS 45A.325 shall, upon conviction, be fined not less than ten thousand dollars (\$10,000), nor more than twenty thousand dollars (\$20,000).

STATEMENT OF FINAL DETERMINATION
OF VIOLATIONS PURSUANT TO KRS 45A.485

Pursuant to KRS 45A.485, the Bidder shall reveal to DMA, prior to the award of a contract, any final determination of a violation by the Bidder within the previous five (5) year period of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342.

For the purpose of complying with the provisions of KRS 45A.485, please list any final determination(s) of violation(s) of KRS Chapters 136, 139, 141, 337, 338, 341, and 342, which have been rendered against the Bidder within the five (5) years preceding the award of this contract. Please include the date of the determination and the state agency issuing the determination. (Please use extra sheets if necessary.)

KRS Violation

Date

State Agency

The Bidder is further notified that KRS 45A.485 requires that for the duration of this contract, the Bidder shall be in continuous compliance with the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342, which apply to the Bidder's operations. KRS 45A.485 further provides that the Bidder's failure to reveal a final determination of a violation of KRS Chapters 136, 139, 141, 337, 338, 341, and 342, or failure to comply with the above-cited statutes for the duration of the contract, shall be grounds for DMA's cancellation of the contract, and the Bidder's disqualification from eligibility to bid or submit proposals to DMA for a period of two (2) years.

ANNUAL AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS

Affidavit Effective Date: _____

Affidavit Expiration Date: _____

Maximum Length One-Year

REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS **PAGE 1 OF 2**

FOR BIDS AND CONTRACTS IN GENERAL:

- I. Each bidder or offeror swears and affirms under penalty of perjury, that:
- a. In accordance with KRS 45A.110 and KRS 45A.115, neither the bidder or offeror as defined in KRS 45A.070(6), nor the entity which he/she represents, has knowingly violated any provisions of the campaign finance laws of the Commonwealth of Kentucky; and the award of a contract to the bidder or offeror or the entity which he/she represents will not violate any provisions of the campaign finance laws of the Commonwealth.
 - b. The bidder or offeror swears and affirms under penalty of perjury that, to the extent required by Kentucky law, the entity bidding, and all subcontractors therein, are aware of the requirements and penalties outlined in KRS 45A.485; have properly disclosed all information required by this statute; and will continue to comply with such requirements for the duration of any contract awarded.
 - c. The bidder or offeror swears and affirms under penalty of perjury that, to the extent required by Kentucky law, the entity bidding, and its affiliates, are duly registered with the Kentucky Department of Revenue to collect and remit the sales and use tax imposed by KRS Chapter 139, and will remain registered for the duration of any contract awarded.
 - d. The bidder or offeror swears and affirms under penalty of perjury that the entity bidding is not delinquent on any state taxes or fees owed to the Commonwealth of Kentucky and will remain in good standing for the duration of any contract awarded.
 - e. The bidder or offeror swears and affirms under penalty of perjury that the entity bidding is not delinquent engaged in, and will not for the duration of the contract engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which Kentucky can enjoy open trade, as defined in Executive Order No. 2018-905.
 - f. The bidder or offeror swears and affirms that the entity bidding, and all subcontractors therein, have not violated any of the prohibitions set forth in KRS 11A.236 during the previous ten (10) years, and further pledge to abide by the restrictions set forth in such statute for the duration of the contract awarded.

FOR "NON-BID" CONTRACTS (I.E. SOLE-SOURCE; NOT-PRACTICAL OR FEASIBLE TO BID; OR EMERGENCY CONTRACTS):

- II. Each contractor further swears and affirms under penalty of perjury, that:
- a. In accordance with KRS 121.056, and if this is a non-bid contract, neither the contractor, nor any member of his/her immediate family having an interest of 10% or more in any business entity involved in the performance of any contract awarded, have contributed more than the amount specified in KRS 121.050 to the campaign of the gubernational candidate elected in the election last preceding the date of contract award.

ANNUAL AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS

REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS PAGE 2 OF 2

- b. In accordance with KRS 121.330(1) and (2), and if this is a non-bid contract, neither the contractor, nor officers or employees of the contractor or any entity affiliated with the contractor, nor the spouses of officers or employees of the contractor or any entity affiliated with the contractor, have knowingly contributed more than \$5,000 in aggregate to the campaign of a candidate elected in the election last preceding the date of contract award that has jurisdiction over this contract award.
- c. In accordance with KRS 121.330(3) and (4), and if this is a non-bid contract, neither the contractor, nor any member of his/her immediate family, his/her employer, or his/her employees, or any entity affiliated with any of these entities or individuals, have directly solicited contributions in excess of \$30,000 in the aggregate for the campaign of a candidate elected in the election last preceding the date of contract award that has jurisdiction over this contract.

As a duly authorized representative for the bidder, offeror, or contractor, I have fully informed myself regarding the accuracy of all statements made in this affidavit, and acknowledge that the Commonwealth is reasonably relying upon these statements, in making a decision for contract award and any failure to accurately disclose such information may result in contract termination, repayment of funds and other available remedies under law.

Signature

Printed Name

Title

Date

Company Name

Address

Phone/Email

Subscribed and sworn to before me by

(Affiant)

(Title)

of _____ this _____ day of _____, 20____.
(Company Name)

Notary Public

[seal of notary]

My commission expires: _____

Appendix C- 2019 Fleming WMA Timber Sale
CULVERT PIPING AND DRAINAGE FEATURES

MATERIALS:

Culvert Pipe: The drainage pipe shall be made of virgin high density polyethylene compounds which conform to the requirements of Type III, Category 4, 5, Grade P30 or P34 Class C per ASTM D-128. HDPE and pipe shapes shall meet the requirements of ASTM F405, ASTM F667 AASHTO M-294-851; ASTM D-2122 with minimum 20-foot lengths.

Headwalls: Headwalls shall be crafted from Class II Channel Lining.

Bedding Material: Bedding Material will be Dense Graded Aggregate conforming to the KYTC standards for pipe construction in Section 701 of the 2008 KYTC Standard Specifications for Road and Bridge Construction.

INSTALLATION:

Excavation: Excavate the pipe trench according to the Kentucky Department of Highways Standard Drawing No. RDI-020-08. Any soft material that is encountered must be removed and replaced with a suitable material.

Bedding: The Culvert Pipe shall be bedded according to the Kentucky Department of Highways Standard Drawing No. RDI-020-08.

Placing the Pipe: Pipe shall be installed according to the manufacturer's recommendations.

Backfilling: Trenches shall be backfilled with DGA and shall be compacted with mechanical tampers or whackers.

CONSTRUCTION TOLERANCES

A tolerance of **plus or minus three (3) inches** from the lines shown on the drawings shall be allowed in the placement of the Culvert Piping.

ADS N-12® ST IB PIPE SPECIFICATION

Scope

This specification describes 4- through 60-inch (100 to 1500 mm) ADS N-12 ST IB pipe for use in gravity-flow drainage applications.

Pipe Requirements

ADS N-12 ST IB pipe shall have a smooth interior and annular exterior corrugations.

- 4- through 10-inch (100 to 250mm) shall meet AASHTO M252, Type S.
- 12- through 60-inch (300 to 1500 mm) shall meet AASHTO M294, Type S or ASTM F2306.
- Manning's "n" value for use in design shall be 0.012.

Joint Performance

Pipe shall be joined using a bell & spigot joint meeting AASHTO M252, AASHTO M294 or ASTM F2306. The joint shall be soil-tight and gaskets, when applicable, shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. A joint lubricant supplied by the manufacturer shall be used on the gasket and bell during assembly.

Fittings

Fittings shall conform to AASHTO M252, AASHTO M294, or ASTM F2306. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the soil-tight joint performance requirements of AASHTO M252, AASHTO M294 or ASTM F2306.

Material Properties

Virgin material for pipe and fitting production shall be high density polyethylene conforming with the minimum requirements of cell classification 424420C for 4- through 10-inch (100 to 250mm) diameters, or 435400C for 12- through 60-inch (300 to 1500mm) diameters, as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. The 12- through 60-inch (300 to 1500mm) virgin pipe material shall comply with the notched constant ligament-stress (NCLS) test as specified in Sections 9.5 and 5.1 of AASHTO M294 and ASTM F2306, respectively.

Installation

Installation shall be in accordance with ASTM D2321 and ADS published installation guidelines with the exception that minimum cover in trafficked areas for 4- through 48-inch (100 to 1200 mm) diameters shall be one foot (0.3 m) and for 60-inch (1500 mm) diameters shall be 2 ft (0.6 m) in single run applications. Contact your local ADS representative or visit our website at www.ads-pipe.com for a copy of the latest installation guidelines.

Pipe Dimensions

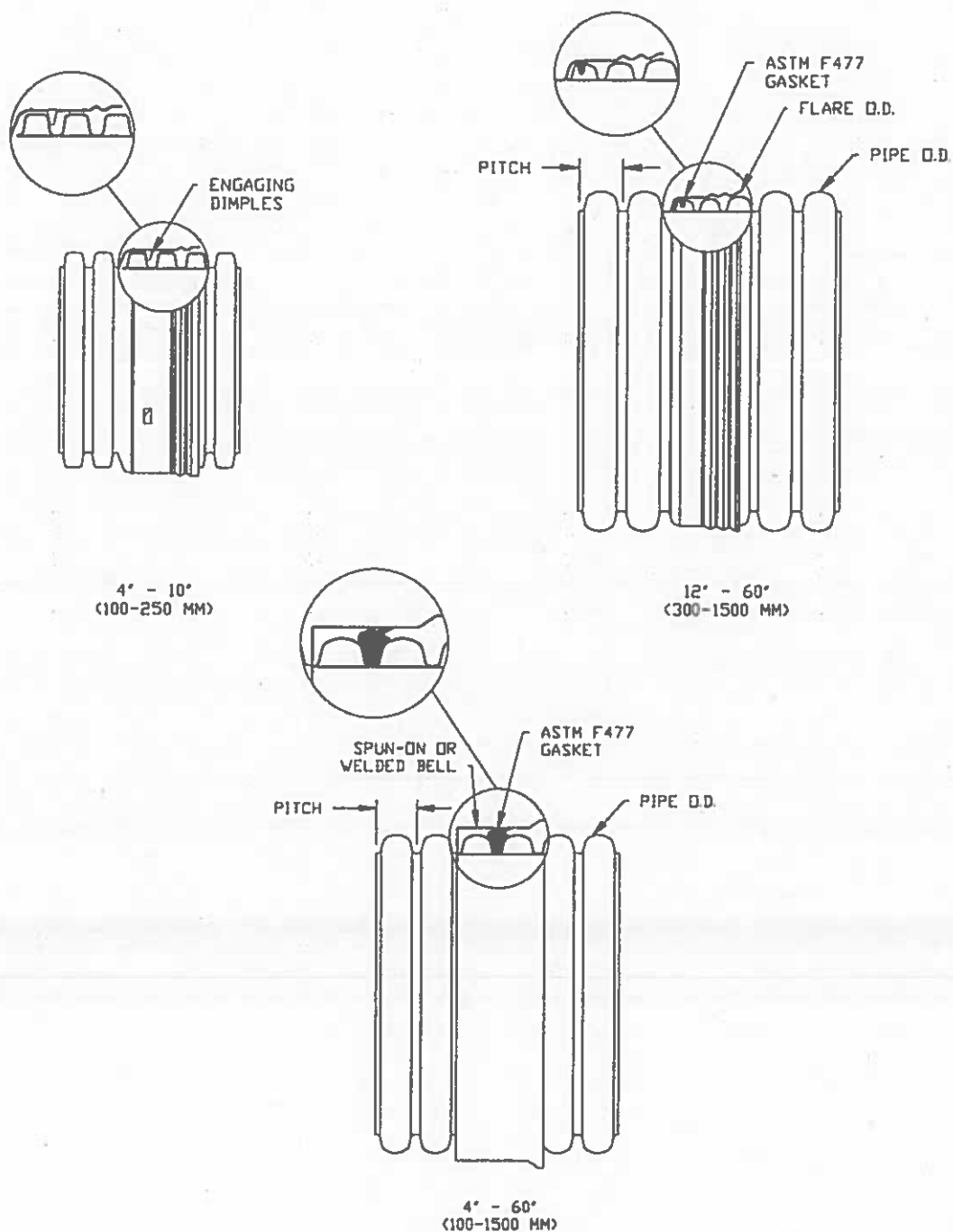
Nominal Diameter, In (mm)													
Pipe I.D. In (mm)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)	15 (375)	18 (450)	24 (600)	30 (750)	36 (900)	42 (1050)	48 (1200)	60 (1500)
Pipe O.D.** In (mm)	4.8 (122)	6.9 (175)	9.1 (231)	11.4 (290)	14.5 (368)	18 (457)	21 (533)	28 (711)	36 (914)	42 (1067)	48 (1219)	54 (1372)	67 (1702)
Perforations	All diameters available with or without perforations.												

*Check with sales representative for availability by region.

**Pipe O.D. values are provided for reference purposes only, values stated for 12- through 60-inch are ± 1 inch. Contact a sales representative for exact values.

N-12® ST IB JOINT SYSTEM

(Joint configuration & availability subject to change without notice. Product detail may differ slightly from actual product appearance.)



FLEMING WMA
2018 Timber Harvest

Stand: Volume, Total
By Species and Volume Units

Stand Number: 1		MBF Per Acre: 5.20	
Stand ID: 1		Area (acres): 7.8	9/6/18
Species	Volume	BF Per Tree	Trees
<i>MBF</i>			
White Oak	4.46	207.74	21.46
Soft Maple	4.92	93.32	52.72
Hard Maple	0.98	108.00	9.08
Yellow Poplar	15.02	99.66	150.74
Hickory	3.57	83.55	42.72
Ash	10.59	154.41	68.58
Cherry	1.02	264.00	3.86
Total	40.56	116.16	349.16
<i>Tons</i>			
Miscellaneous Hardwood	100.15	331.45	302.17
Total	100.15	331.45	302.17

FLEMING WMA
2018 Timber Harvest

Stand: Volume, Total
By Species and Volume Units

Stand Number: 2	MBF Per Acre: 6.72		
Stand ID: 2	Area (acres): 7.7		9/6/18
Species	Volume	BF Per Tree	Trees
<i>MBF</i>			
Red Oak	1.76	124.61	14.09
White Oak	3.47	254.14	13.67
Chestnut Oak	2.05	219.95	9.30
Soft Maple	1.82	216.44	8.41
Yellow Poplar	30.36	245.84	123.50
Hickory	6.28	103.07	60.97
Miscellaneous Hardwood	0.69	66.00	10.44
Walnut	2.78	156.98	17.70
Black Oak	2.55	365.02	6.98
Total	51.76	195.26	265.07
<i>Tons</i>			
Hickory	8.34	571.70	14.58
Miscellaneous Hardwood	58.70	513.36	114.34
Total	67.04	519.96	128.93

FLEMING WMA
2018 Timber Harvest

Stand: Volume, Total
By Species and Volume Units

Stand Number: 3		MBF Per Acre: 5.67	
Stand ID: 3		Area (acres): 10.0	
		9/6/18	
Species	Volume	BF Per Tree	Trees
<i>MBF</i>			
Red Oak	2.53	172.49	14.65
Soft Maple	21.25	187.95	113.06
Yellow Poplar	25.66	167.55	153.15
Hickory	0.58	48.00	12.05
Cherry	2.75	114.24	24.06
Hackberry	2.16	233.50	9.24
Black Oak	1.75	496.00	3.54
Total	56.68	171.87	329.76
<i>Tons</i>			
Miscellaneous Hardwood	113.22	447.88	252.78
Total	113.22	447.88	252.78

FLEMING WMA
2018 Timber Harvest

Stand: Volume, Total
By Species and Volume Units

Stand Number: 4		MBF Per Acre: 10.46	
Stand ID: 4		Area (acres): 12.6	
		9/6/18	
Species	Volume	BF Per Tree	Trees
<i>MBF</i>			
Red Oak	14.68	283.57	51.76
White Oak	11.93	227.00	52.54
Chestnut Oak	7.82	205.60	38.02
Soft Maple	3.83	299.53	12.13
Hard Maple	0.61	62.00	9.82
Yellow Poplar	69.25	243.85	283.99
Hickory	3.30	96.63	34.14
Cherry	7.55	202.63	37.28
Red Cedar	0.77	130.00	5.94
Black Gum	4.41	161.27	27.35
Black Oak	7.86	257.79	30.50
Total	131.81	225.91	583.47
<i>Tons</i>			
Miscellaneous Hardwood	33.03	488.71	67.58
Total	33.03	488.71	67.58

FLEMING WMA
2018 Timber Harvest
Area (acres): 5.9

Stand	6	7	8	9	10	11	12	13	Spp Total
Acres:	1.36	0.68	0.45	0.53	1.44	0.53	0.52	0.36	
Species	Volume in MBF								
White Oak	0.00	0.00	1.00	0.86	0.00	0.00	0.00	0.00	1.86
Red Oak	0.00	0.00	3.92	1.93	0.64	0.00	0.00	0.00	6.49
Chestnut Oak	0.88	0.00	7.08	10.63	0.00	0.00	0.00	0.00	18.59
Hard Maple	9.50	3.75	0.66	1.00	0.48	0.08	0.00	0.83	16.30
Hickory	1.35	0.00	1.19	1.00	0.14	0.00	0.32	0.25	4.25
Black Cherry	0.00	2.01	0.70	0.00	1.52	0.42	0.00	2.83	7.48
Black Walnut	0.14	0.47	0.00	0.00	0.00	0.00	0.00	0.38	0.99
Yellow Poplar	0.30	0.00	0.26	0.00	17.10	8.99	9.02	0.00	35.67
Other	2.26	0.68	0.00	0.22	0.64	0.40	0.79	0.25	5.24
Stand Total	14.42	6.91	14.81	15.64	20.54	9.89	10.13	4.54	96.88

FLEMING WMA-2019 Timber Harvest

